

PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Improvements in or relating to Electric Terminal Couplings

I, MICHAEL BARRIE CHRISTOPHER, a British subject of 1 Farrer Road, London, N.8., do hereby declare the invention for which I pray that a patent may be granted to me, and the method by which it is to be performed to be particularly described in and by the following statement:—

This invention relates to electric terminal couplings for sheathed electric cables having a core composed of individual wire strands and a protective sheath of electrical insulating material surrounding the core.

The conventional construction of terminal coupling comprises a support block having a cable aperture or recess for the reception of the end of the cable and a terminal member screwed into a further aperture which opens into the cable aperture, the terminal member and/or the support block being made of electrical conducting material. In use, the sheath of the cable is cut away at the end to expose the core, and the naked core is then inserted in the cable aperture and the terminal member screwed down to clamp the naked core against the wall of the cable aperture. The cutting away of the sheath from the core is, however, a time-consuming and irksome operation, and care must be taken to ensure that individual strands of the core are not cut away with the sheath.

It has previously been proposed to provide the terminal member with a sharp pointed end adapted to pierce the sheath of the cable and make electrical engagement with the core. With these constructions however there is a risk that the wall of the sheath may be drawn into the opening formed in the cable, due to the frictional force between the sheath and the pointed end of the terminal member, and prevent good electrical contact being made between the terminal member and the core of the cable.

According to the present invention there is provided an electric terminal coupling for a sheathed electric cable, comprising a support having a seat or track for the sheathed cable,

and a terminal member having a conical pointed end and screw threaded means for forcing the conical end of the terminal member against a cable on the seat or track so that the conical end pierces the wall of the sheath on the cable and makes electrical contact with the core of the cable, wherein the conical end of the terminal member is provided with a screw thread arranged to draw the sheath up the wall of the conical end and open out the opening pierced in the sheath upon rotation of the terminal member.

One construction of a terminal coupling according to the invention will now be described, by way of example, with reference to the accompanying drawing, in which:

Fig. 1 is a sectional side elevation view of the terminal coupling, and

Fig. 2 is a perspective exploded view of the terminal coupling.

The terminal coupling shown in Figs. 1 and 2 comprises a support block 10 provided with a horizontal cable aperture 11 and a vertical screw-threaded aperture 12 leading from the top of the block 10 and opening at its lower end into the cable aperture 11, the two apertures 11, 12 being of circular cross-section and approximately equal diameter. The lower wall of the cable aperture 11 forms a track for a sheathed cable 13, and the part of the track immediately below the vertical aperture 12 is formed with a conical recess 14. A terminal member 15 has a cylindrical screw-threaded shank 16 which is screwed into the vertical aperture 12. The upper end of the terminal member has a slotted head 17 for engagement with a screw driver, and the lower end of the terminal member has a conical portion 18 which terminates in a sharp point 19, the conical wall being formed with a helical screw thread 20 having a pitch greater than that of the screw thread 21 on the shank but of the same hand. The conical portion 18 is co-axial with the shank 16 of the terminal member. The support block and the

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terminal member are both made of electrical conducting material.

In use, the sheathed cable 13 is inserted into the cable aperture 11, and the terminal member 15 is screwed down on to the sheathed cable. The pointed end 19 of the terminal member first pierces the sheath 22 of the cable and, since the helical screw thread 20 has a greater pitch than the screw thread 21 on the shank, the sheath is drawn up the conical portion 18 of the terminal member and opens out the opening pierced in the sheath by the pointed end of the terminal member. Upon screwing the terminal member further into the support block, the pointed end 19 pierces the core 23 of the cable and the helical screw thread 20 draws the individual strands of the core up the wall of the conical portion of the terminal member, thereby ensuring good electrical contact between the terminal member and the core of the cable. The conical recess 14 enables the pointed end 19 of the terminal member to penetrate right through the cable. An electrical appliance to be supplied with current from the cable may be connected to either the terminal member or the support block.

WHAT I CLAIM IS:—

1. An electric terminal coupling for a sheathed electric cable, comprising a support having a seat or track for the sheathed cable, and a terminal member having a conical pointed end and screw threaded means for forcing the conical end of the terminal member against a cable on the seat or track so that the conical end pierces the wall of the sheath on the cable and makes electrical contact with the core of the cable, wherein the conical end of the terminal member is provided with a screw thread arranged to draw the sheath up the wall of the conical end and open out the opening pierced in the sheath upon rotation of the terminal member.

2. An electric terminal coupling as claimed in Claim 1, wherein the support is made of electrical conducting material and the terminal member is electrically connected to the support.

3. An electric terminal coupling as claimed in claim 1 or 2, wherein the terminal member has a screw threaded shank engaged in a screw threaded aperture in the support, the track being positioned opposite an end of the aperture, and the conical pointed end is in axial alignment with the shank, the screw threads on the shank and conical end of the terminal member being of the same hand.

4. An electric terminal coupling as claimed in claim 3, wherein the screw thread on the pointed conical end of the terminal member is of coarser pitch than the screw thread on the shank.

5. An electric terminal coupling as claimed in claim 3 or 4, wherein the support comprises a block of electrical conducting material having a cable aperture for reception of the sheathed cable and a screw-threaded aperture for the reception of the screw-threaded shank of the terminal member, the screw-threaded aperture being substantially normal to and opening into the cable aperture.

6. An electric terminal coupling as claimed in claim 5, wherein the wall of the cable aperture opposite the screw-threaded aperture is provided with a recess for accommodating the pointed end of the conical portion of the terminal member.

7. An electric terminal coupling substantially as hereinbefore described with reference to the accompanying drawing.

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Fig.1.

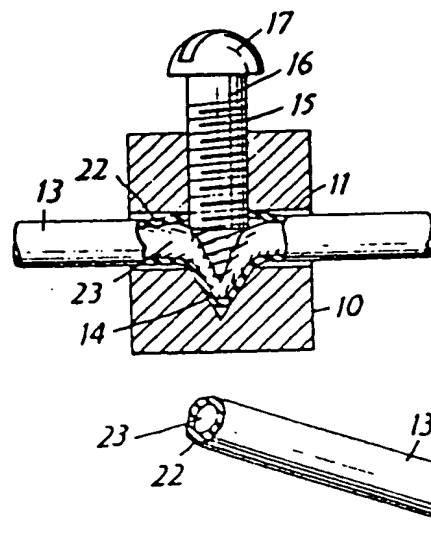
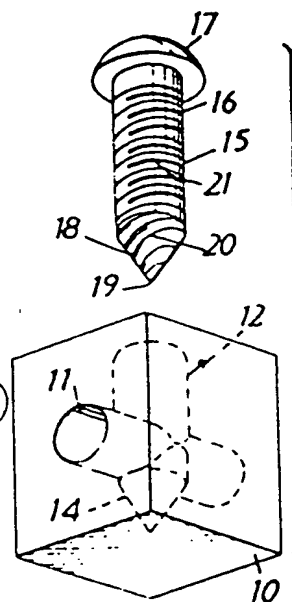


Fig. 2.



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